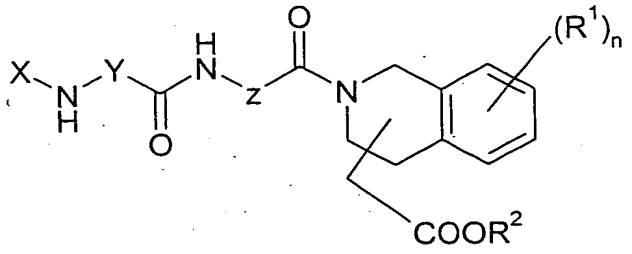
Patent Claims

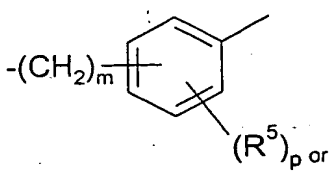
1. Compounds of the formula I

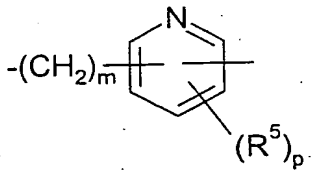


I

in which

X is H, -C(=NR^3)-NHR^4 or Het,





Y is -(CH2)m-,

Z is NH or CH_2,

R^1 and R^5 are each, independently of one another, H, A, OH, OA, aryl-alkyl, Hal, -CO-A, CN, NO_2, NHR^3, COOA, COOH, SO_2A, CF_3 or OCF_3,

R^2 is in each case, independently of the others, H or A,

R^3 and R^4 are each, independently of one another, H, A, -CO-A, NO_2 or CN,

A is alkyl having 1-6 carbon atoms,

m is 0, 1, 2, 3, 4, 5 or 6,

n and p are, independently of one another, 1, 2 or 3,

and physiologically acceptable derivatives thereof, in particular salts and solvates thereof.

2. Compounds of the formula I according to Claim 1, in which A is methyl, furthermore ethyl, isopropyl, n-propyl, n-butyl, isobutyl, sec-butyl or tert-butyl.

3. Compounds of the formula I according to one or more of Claims 1 and 2, in which Het is 4-methylpyridin-2-yl, pyridin-2-yl, pyriminin-2-yl, imidazol-2-yl, benzimidazol-2-yl and hydrogenated derivatives thereof.

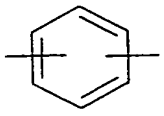
4. Compounds of the formula I according to one or more of Claims 1 to 3, characterised in that R^1 and R^5, independently of one another, are preferably H, A, CN, NO_2, Hal or –COA-.

5. Compounds of the formula I according to one or more of Claims 1 to 3, characterised in that R^2 is preferably H or A.

6. Compounds of the formula I according to one or more of Claims 1 to 3, characterised in that R^3 and R^4, independently of one another, are preferably H or –COA-.

7. Compounds of the formula I according to one or more of Claims 1 to 3, characterised in that X is H, -C(=NH)-NH_2, -C(=N-methyl)-NH_2, 4-methylpyridin-2-yl, pyridin-2-yl, pyrimidin-2-yl, imidazol-2-yl, benzimidazol-2-yl and hydrogenated derivatives thereof.

8. Compounds of the formula I according to one or more of Claims 1 to 3, characterised in that Y is -$(CH_2)_m$- or

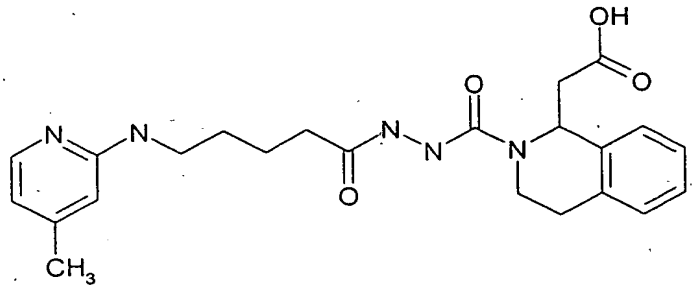


9. Compounds of the formula I according to one or more of Claims 1 to 3, characterised in that n and p, independently of one another, are 1 or 2.

10. Compounds of the formula I according to one or more of Claims 1 to 3, characterised in that m is 0, 2 or 4.

11. Compounds of the formulae I1 to I36:

I1



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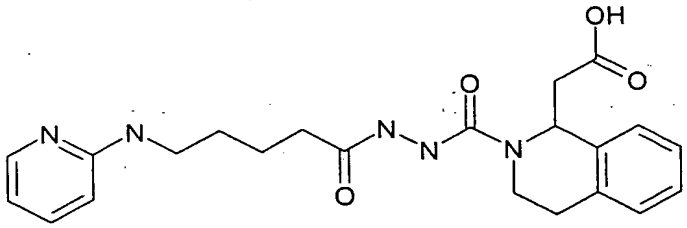

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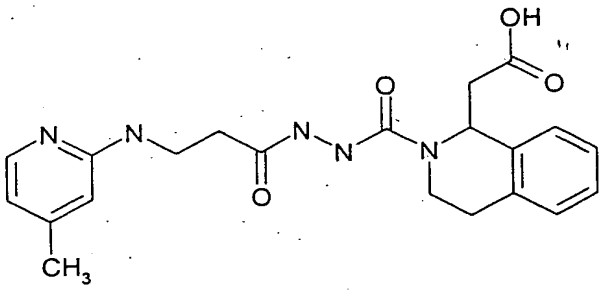

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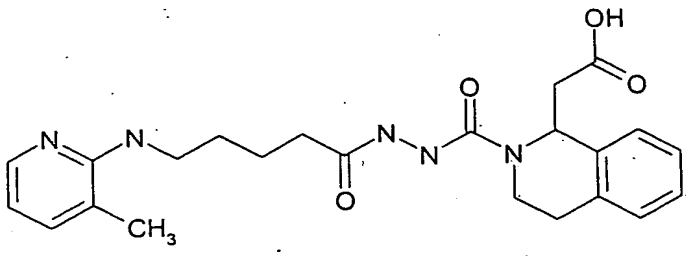

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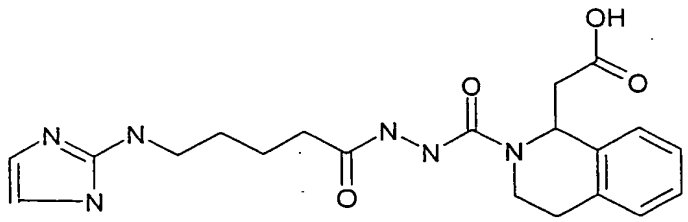

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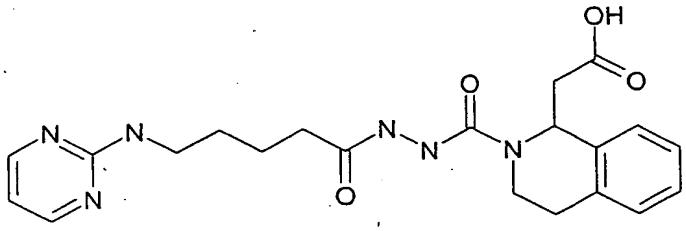

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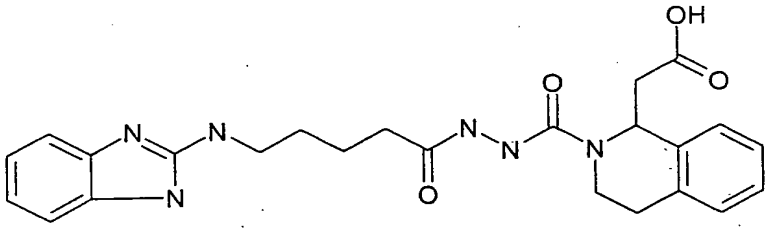

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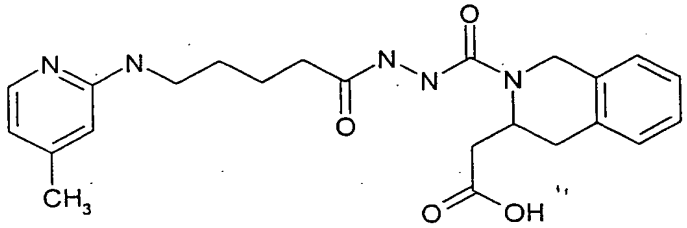

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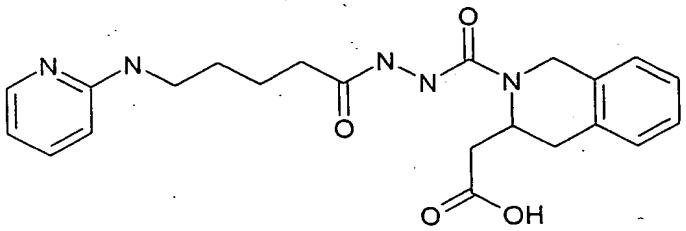

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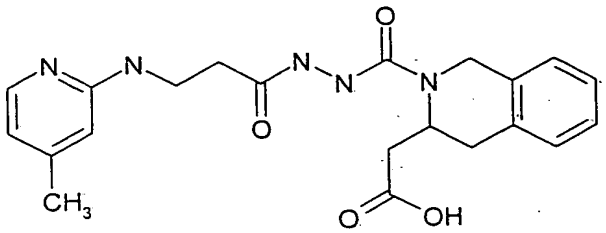

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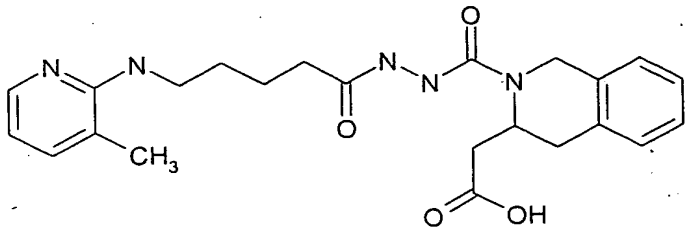

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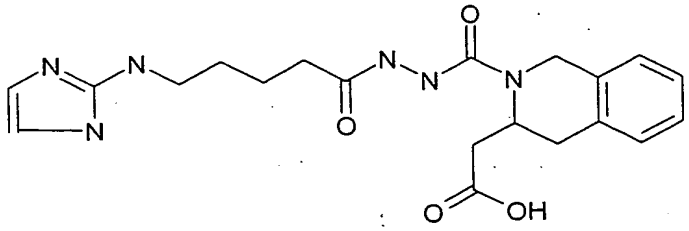

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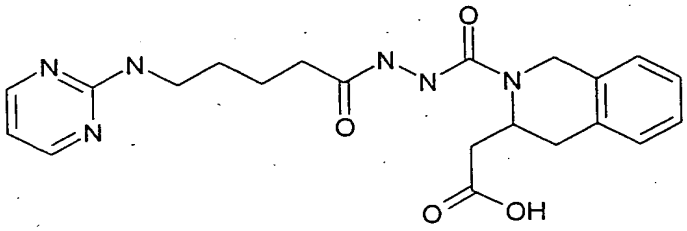

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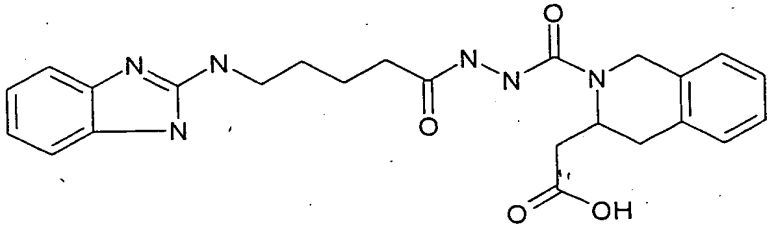

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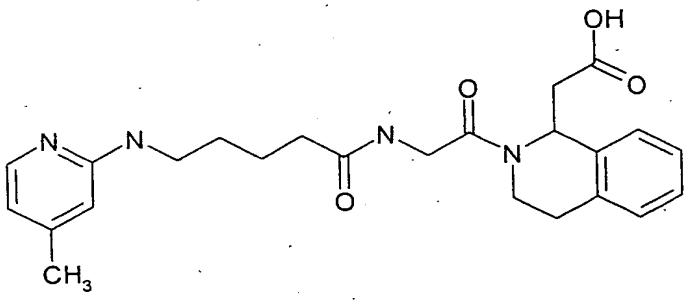

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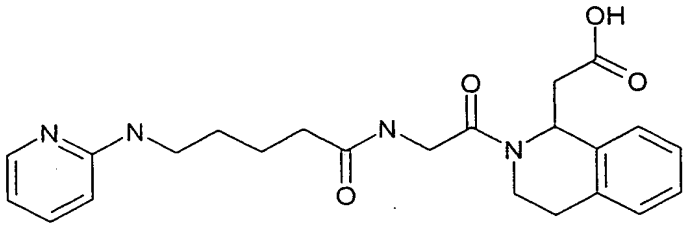

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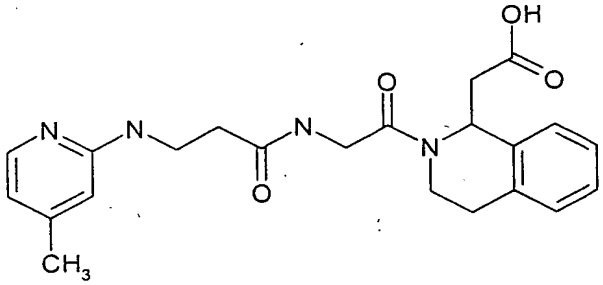

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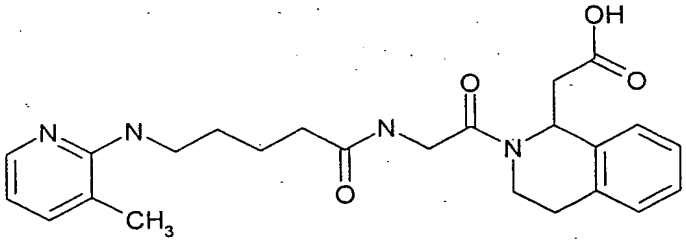

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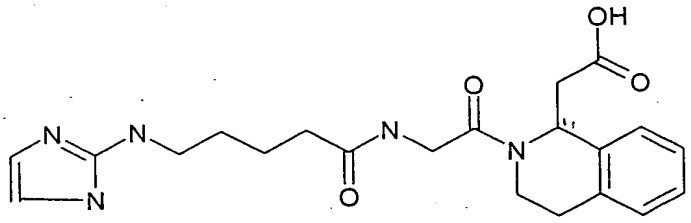

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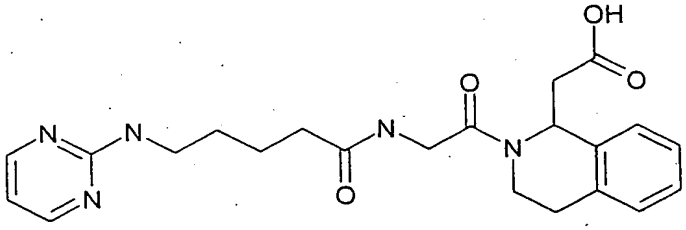

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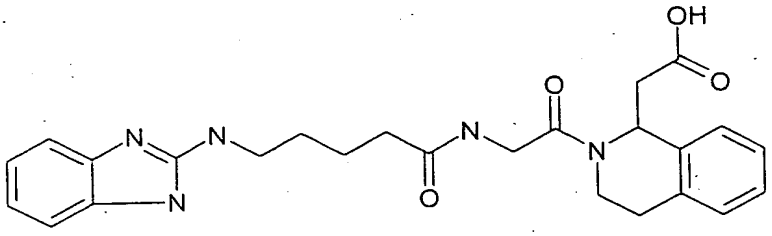

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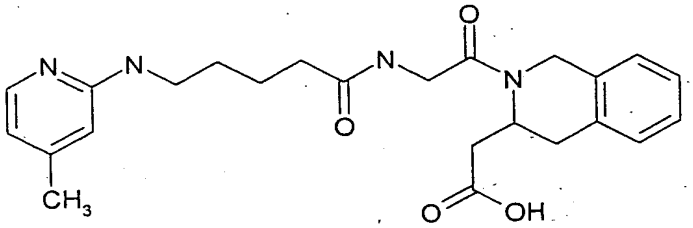

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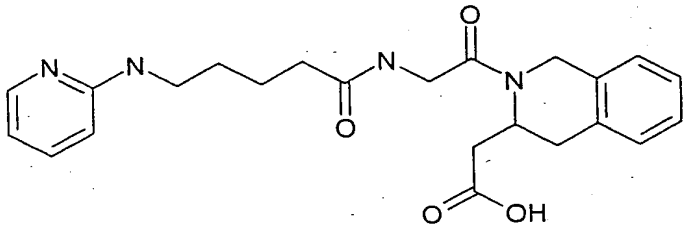

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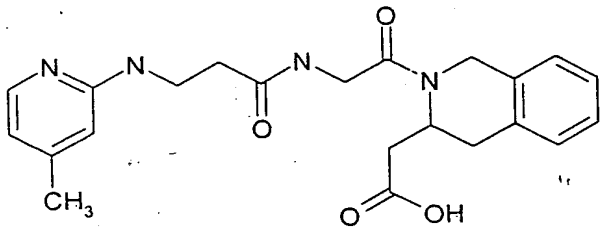

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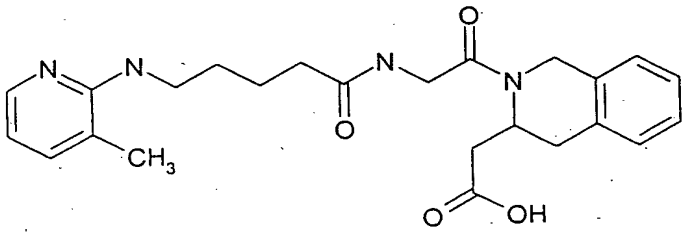

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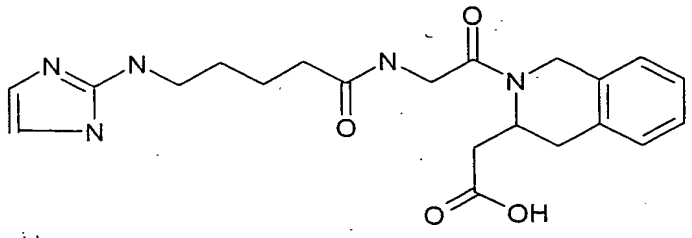

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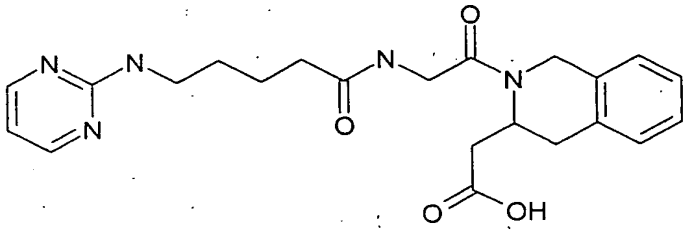

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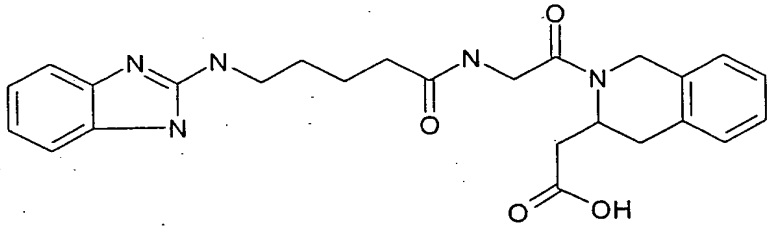

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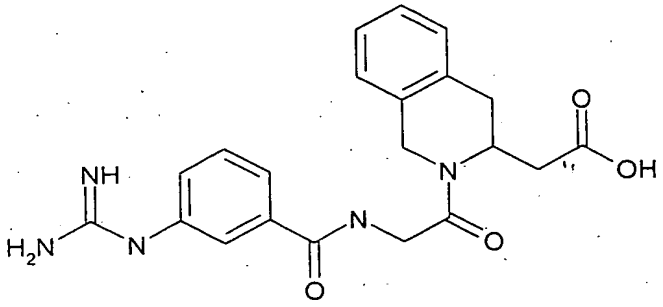

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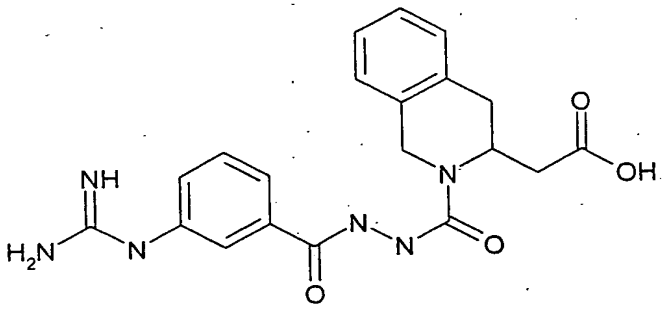

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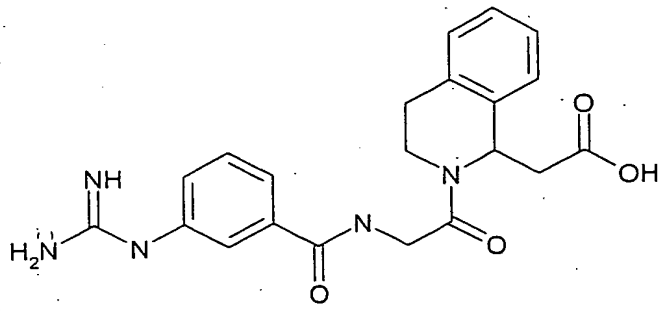

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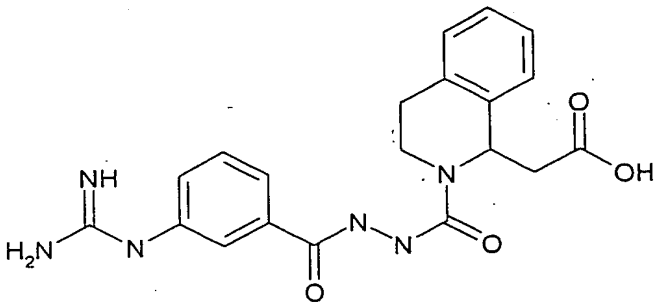

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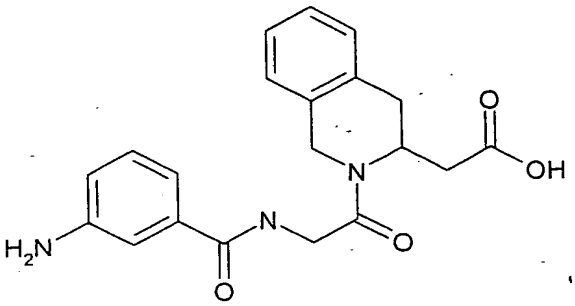

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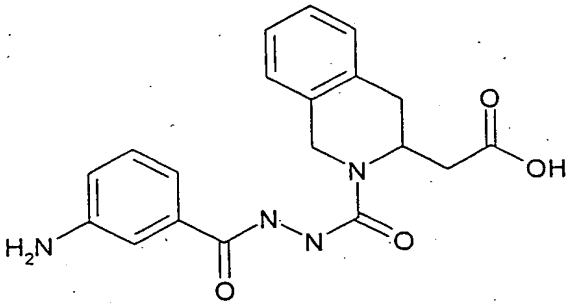

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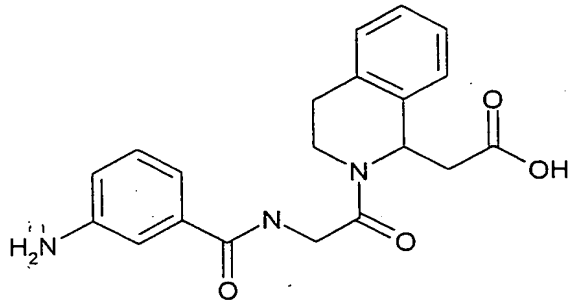

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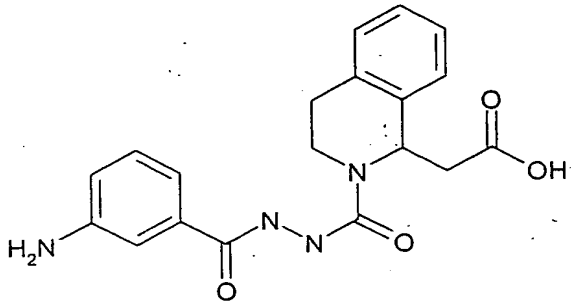
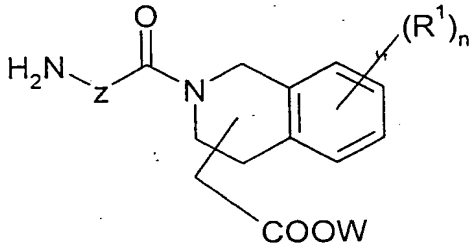


12. Process for the preparation of compounds of the formula I according to one or more of Claims 1 to 11 and salts thereof, characterised in that

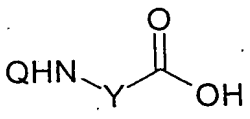
a) a compound of the formula II



II

in which Z, R^1 and n are as defined above, and W is a conventional protecting group or a solid phase used in peptide chemistry,

is reacted with a compound of the formula III



III

in which Y is as defined above, and Q is a suitable protecting group or Het, in the presence of a condensing agent, such as, for example, HATU,

and the protecting groups and/or the solid phase are subsequently removed,

and, where appropriate, the resultant product is, if Q as protecting group is removed, reacted with a suitable guanyl compound, such as, for example, N,N'-bis-BOC-1-guanylpyrazole, and, if desired, the remaining protecting groups and/or the solid phase are removed,

or

b) a compound of the formula I is liberated from one of its functional derivatives by treatment with a solvolysing or hydrogenolysing agent,

and/or in that a basic or acidic compound of the formula I is converted into one of its salts by treatment with an acid or base.

13. Compounds of the formula I according to one or more of Claims 1 to 11 and physiologically acceptable salts or solvates thereof as therapeutic active ingredients.

14. Compounds of the formula I according to one or more of Claims 1 to 11 and physiologically acceptable salts or solvates thereof as integrin inhibitors.

15. Compounds of the formula I according to one or more of Claims 1 to 11 and physiologically acceptable salts or solvates thereof for use in combating diseases.

16. Pharmaceutical preparation characterised by a content of at least one compound of the formula I according to one or more of Claims 1 to 11 and/or one of its physiologically acceptable salts or solvates.

17. Use of compounds of the formula I according to one or more of Claims 1 to 11 and/or physiologically acceptable salts or solvates thereof for the preparation of a pharmaceutical preparation.

18. Use of compounds of the formula I according to one or more of Claims 1 to 11 and/or physiologically acceptable salts or solvates thereof for the preparation of a pharmaceutical preparation for combating thromboses, cardiac infarction, coronary heart diseases, arteriosclerosis, inflammation, tumours, osteoporosis, infections and restenosis after angioplasty.

19. Use of compounds of the formula I according to one or more of Claims 1 to 11 and/or physiologically acceptable salts or solvates thereof in pathological processes which are maintained or propagated by angiogenesis.